Application No. 10/565,843   Docket No.: 1163-0548PUS1
Amendment dated August 11, 2008
Reply to Office Action of May 15, 2008

REMARKS

Applicants thank the Examiner for total consideration given the present application. Claims 1-20 are currently pending of which claims 8-20 are withdrawn as being directed to non-elected species. Claim 1 has been amended. Applicants respectfully request reconsideration of the rejected claims in light of the amendment and remarks presented herein, and earnestly seek timely allowance of all pending claims.

35 U.S.C. § 102 REJECTION – Vetrovec, Brauch

The Examiner rejects claims 1-5 under 35 U.S.C. § 102(e) as allegedly being anticipated by Vetrovec (U.S. Patent No. 7,085,304)[hereinafter "Vetrovec"].

The Examiner further rejects claims 1 and 6 under 35 U.S.C. § 102(b) as allegedly being anticipated by Brauch (U.S. Patent No. 5,553,088)[hereinafter "Brauch"]. Applicants respectfully traverse these rejections.

For a Section 102 rejection to be proper, the cited reference must teach or suggest each and every claimed element. *See M.P.E.P. 2131; M.P.E.P. 706.02.* Thus, if the cited reference fails to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, neither Vetrovec nor Brauch teaches or suggests each and every claimed element. For example, independent claim 1 recites, *inter alia*, "the laser light incidence surface of said solid state laser medium having a *size of a in a direction perpendicular to a plane* defined by both an optical axis of said laser light and a normal to the laser light incidence surface of said solid state laser medium, and a *size of b in a longitudinal direction perpendicular to said direction and said normal*, the *sizes having a relationship given by b=a/cosθ*, where θ is an incidence angle at which said laser light is incident upon the laser light incidence surface, *and wherein the value of incidence angle θ provides a relationship given by b>a*." *Emphasis added.*

First, it is respectfully submitted that Vetrovec fails to teach or suggest the above-identified claim feature.

Vetrovec discloses a conventional amplifier module for amplifying a source light in a solid state laser. The amplifier module includes a disk 12 having a diameter of about 10-300 mm (D_c). The disk 12 also includes two substantially parallel surfaces 22, 24 and an optical laser gain material 26 having a diameter (D_L). The optical laser gain material is capable of amplifying a laser beam 64 in response to an optical pump radiation 36. Laser gain material 26 may be implemented with suitable optical material having a host lattice doped with suitable ions capable of being pumped to laser transition. When the laser beam 64 has an angle of incidence with disk 12 that is approximately normal, the perimeter of gain medium 26 may be circular or nearly circular to provide good mode fill. However, when the laser beam 64 has an angle of incidence that is significantly off of the normal, the perimeter of gain medium 26 may be more elliptical in shape. (See col. 6, lines 4-25.)

Vetrovec is distinguished from the claimed invention in that nowhere does Vetrovec teach or suggest that the disk 12 or the optical laser gain material 26 includes a laser light incidence surface having a _**size of a in a direction perpendicular to a plane**_ defined by both an optical axis of the laser beam 64 and a normal to the laser light incidence surface of the solid state laser medium included in the laser gain material 26, and a _**size of b in a longitudinal direction perpendicular to said direction and said normal**_, the _**sizes having a relationship given by b=a/cosθ**_, where θ is an incidence angle at which said laser light is incident upon the laser light incidence surface, _**and wherein the value of incidence angle θ provides a relationship given by b>a**_.

The Examiner alleges that the diameter D_c of the disk 12 can be interpreted as disclosing the claimed size a and size b. The Examiner further alleges that since the diameter D_c of the disk 12 can be interpreted as disclosing the claimed size a and size b, the relationship given by b=a/cosθ is also met at value cosθ=1. It is respectfully submitted that the Examiner's such allegation is totally unfounded. The diameter D_c of the disk 12 does not have an arrangement to

provide a *size of a* in a direction ***perpendicular*** to a plane defined by both an optical axis of the laser beam 64 and a normal to the laser light incidence surface of the solid state laser medium included in the laser gain material 26, and a *size of b* in a ***longitudinal direction perpendicular to said direction and said normal***. Even if, *assuming arguendo*, the diameter D_c of the disk 12 is interpreted to provide a size of a in a direction perpendicular to a plane defined by both an optical axis of the laser beam 64 and a normal to the laser light incidence surface of the solid state laser medium included in the laser gain material 26, ***the same diameter D_c cannot be interpreted*** to provide a *size of b* in a ***longitudinal direction perpendicular to said direction and said normal***.

Further, claim 1 has been amended to clarify that ***the value of incidence angle θ provides a relationship given by b>a***. It is respectfully submitted that Vetrovec fails to teach or suggest this feature.

Therefore, for at least these reasons, independent claim 1 is distinguishable from Vetrovec. Claims 2-5 depend from claim 1, directly or indirectly. Therefore, for at least the reasons stated with respect to claim 1, claims 2-5 are also distinguishable from Vetrovec.

Accordingly, Applicant respectfully requests that the rejection of claims 1-5, based on Vetrovec, be withdrawn.

Second, it is respectfully submitted that Brauch fails to teach or suggest a laser light incidence surface of a solid state laser medium having a "*size of a in a direction perpendicular to a plane* defined by both an optical axis of said laser light and a normal to the laser light incidence surface of said solid state laser medium, and a *size of b in a longitudinal direction perpendicular to said direction and said normal*, the *sizes having a relationship given by b=a/cosθ*, where 0 is an incidence angle at which said laser light is incident upon the laser light incidence surface, ***and wherein the value of incidence angle θ provides a relationship given by b>a***." *Emphasis added.*

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Similar to Vetrovec, Brauch also teaches a laser amplifying system 10 which includes a radiation-amplifying crystal 12 supplied with pumping light 32 via a surface 22. The Examiner again alleges that the diameter of the radiation-amplifying crystal 12 can be interpreted as disclosing the claimed size a and size b. As disclosed in great detail above that such allegation is totally unfounded. Further, claim 1 has been amended to clarify that *the value of incidence angle θ provides a relationship given by b>a*. It is respectfully submitted that Brauch fails to teach or suggest this feature.

Therefore, for at least these reasons, independent claim 1 is distinguishable from Brauch. Claim 6 depends from claim 1. Therefore, for at least the reasons stated with respect to claim 1, claim 6 is also distinguishable from Brauch.

Accordingly, Applicant respectfully requests that the rejection of claims 1 and 6, based on Brauch, be withdrawn.

35 U.S.C. § 102 REJECTION – Brauch

Claim 7 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Brauch. Claim 7 depends from claim 1. Therefore, for at least the reasons stated with respect to claim 1, claim 7 is also distinguishable from Brauch.
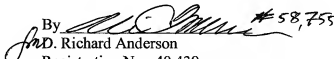
CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Ali M. Imam Reg. No. 58,755 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By _____ #58,755

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